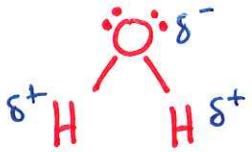
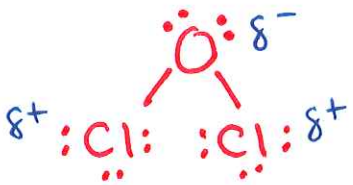
Name Answer Key Hour _____

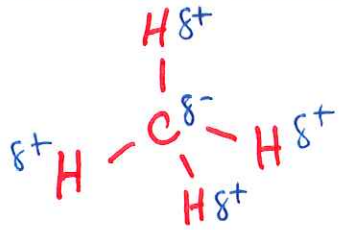
Polarity of Molecules

(Honors Chemistry)

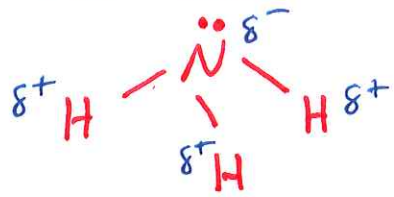
- Using the VSEPR theory, do your best to draw a 3-D model of the following molecules.
- Assign the slightly positive (δ^+) and slightly negative (δ^-) symbol to each polar covalent bond.
- Determine if the molecule is polar or nonpolar and write your answer on the line provided.

1. N_2: Linear / Nonpolar :N≡N:	2. HF: Linear / Polar δ^+H – F: δ^-
3. H_2O: Bent / Polar 	4. C_2H_2: Linear / Nonpolar H – C≡C – H
5. CO_2: Linear / Nonpolar δ^- :O=C=O: δ^- (δ^+ on C)	6. H_2S: Bent / Polar 
7. O_2: Linear / NONPOLAR :O=O:	8. I_2: Linear / NONPOLAR :I – I:
9. Cl_2O: Bent / Polar 	10. HCN : Linear / Polar δ^+H – C≡N: δ^- (δ^+ on C)

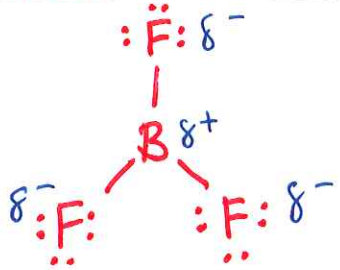
11. CH_4: Tetrahedral / NONPOLAR



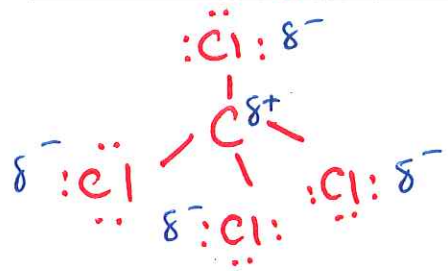
12. NH_3: TRIGONAL PYRAMIDAL / POLAR



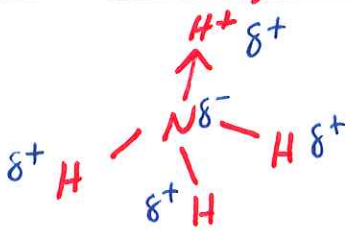
13. BF_3: TRIGONAL PLANAR / NON POLAR



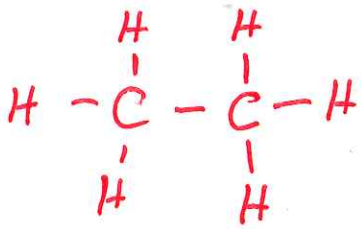
14. CCl_4: Tetrahedral / NON POLAR



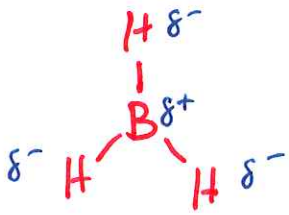
15. NH_4^+: Tetrahedral / NONPOLAR



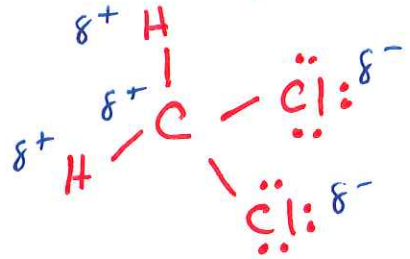
16. C_2H_6: NONPOLAR



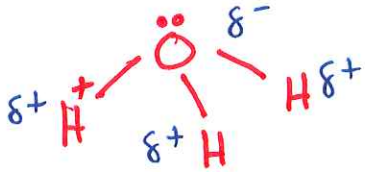
17. BH_3: TRIGONAL PLANAR / NONPOLAR



18. CH_2Cl_2: Tetrahedral / POLAR



19. H_3O^+: TRIGONAL PYRAMIDAL / POLAR



20. PCl_3: TRIGONAL PYRAMIDAL / POLAR